

## POSTER PRESENTATION

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# The influence of lateral spinal curvature on range of motion

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### Background

This study was conducted in Primary school on 97 pupils, age12±2, on 55 girls and 42 boys.

### Aim

The objective of this research was to establish the existence of lateral spinal curvature, as well as its influence on range of motion of the spine.

### Methods

Height, body mass, spacing between hands, and length of the upper limbs were measured in all of the examinees. Lateral spinal curvature was identified using a bob (plummet) and clinical examination. Examinees performed five spinal flexibility tests: right and left lateral mobility test, forward bending test, shoulder static flexibility test, and neck and trunk static flexibility test. Results gathered using a bob (plummet) and clinical examination were compared to the results of flexibility tests. Difference between these methods in children with, and without, lateral spinal curvature was determined with statistical T-test. Medcalc program was used for statistics. Statistical significance was affirmed at  $p=0.01$  level.

### Results

Results on the prevalence of lateral spinal curvature in this study show less case in male population, 35.71%, over female population, 40%. Results of all four flexibility tests were in favor of healthy population. Neck and trunk static flexibility test showed difference of 4.11cm with statistical significance of  $p=0.0021$ , shoulder static flexibility test 4.41cm ( $p=0.0078$ ), right lateral mobility test 2.62cm ( $p=0.0008$ ), and left lateral mobility test

2.52cm ( $p=0.0017$ ). There was no statistical significance for forward bending test.

### Conclusion

According to above mentioned results, it can be concluded that lateral spinal curvature has a considerable significance on spinal mobility.

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### References

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